



Climate Change and Health Equity: Existing Disease Burden

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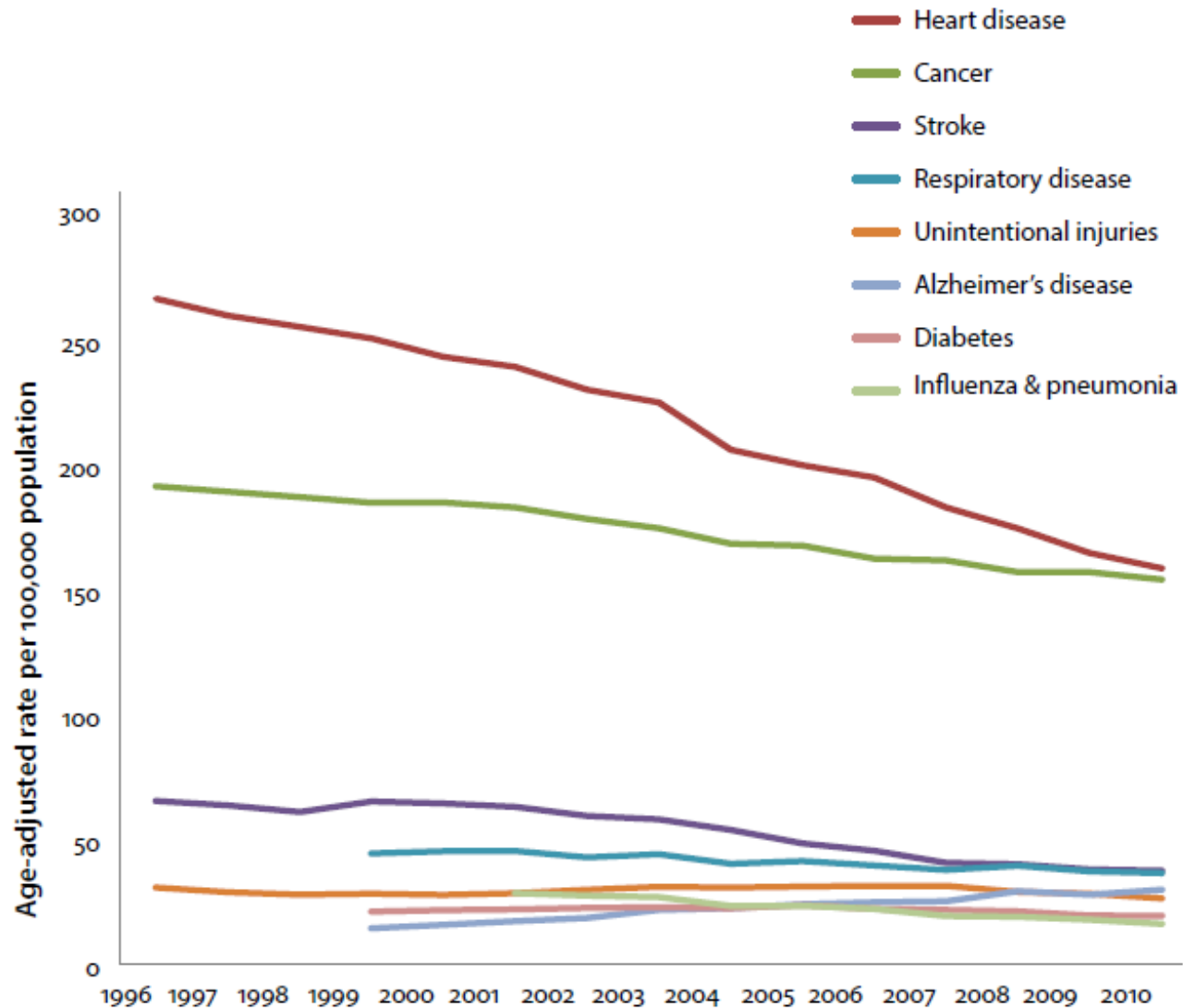
Climate Change and Health Equity

- What is the existing burden of disease ?
- What are the existing inequities in health outcomes?
- What is producing population vulnerabilities and inequities in the health outcomes?
- How will climate change impact health outcomes and the factors producing health inequities

“Climate change will, absent other changes, amplify some of the existing health threats the nation now faces. Certain people and communities are especially vulnerable, including children, the elderly, the sick, the poor, and some communities of color.” – 3rd National Assessment of Climate Change, 2014

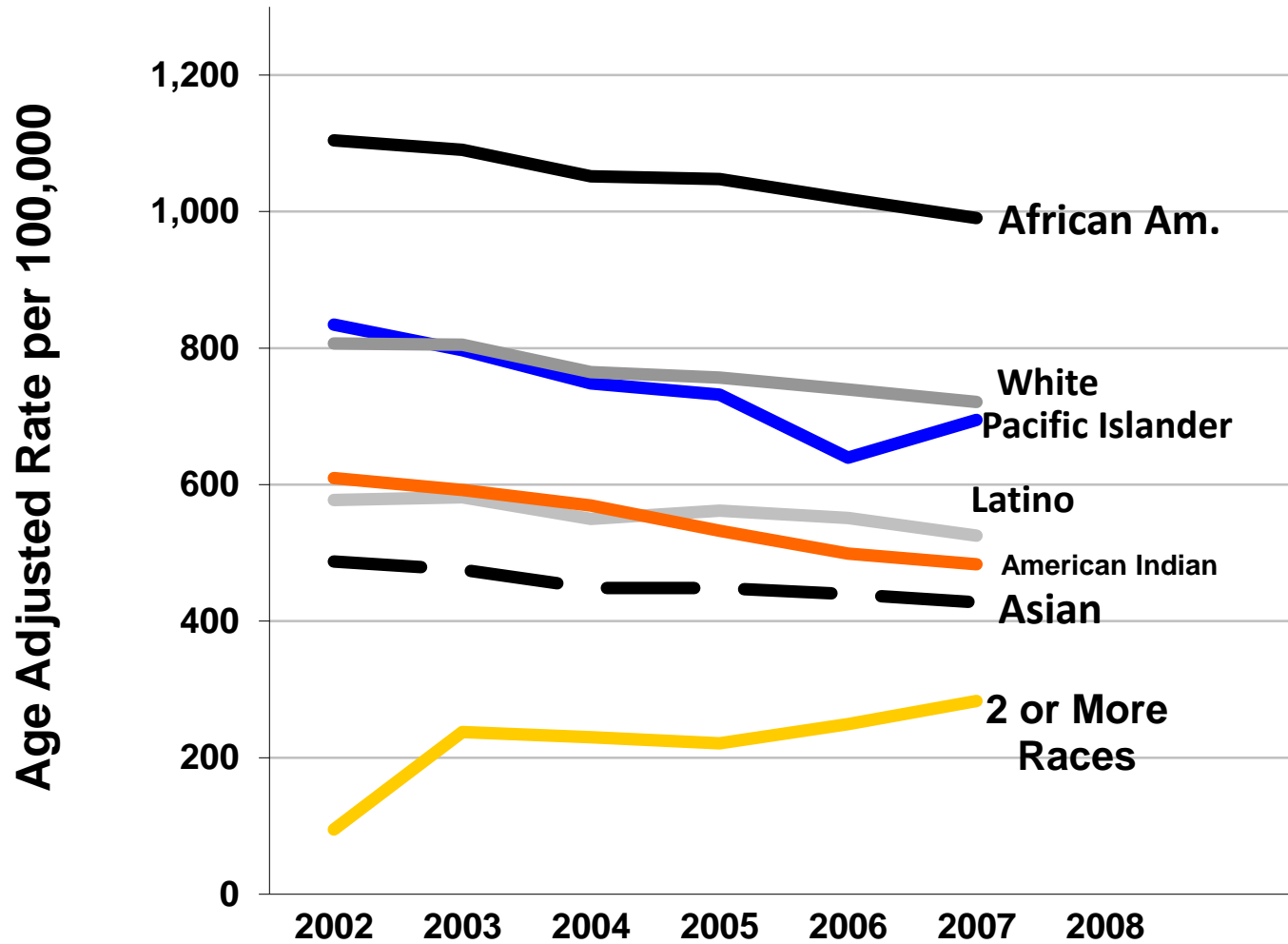


Burden of Disease and Injuries: Leading Causes of Death, California



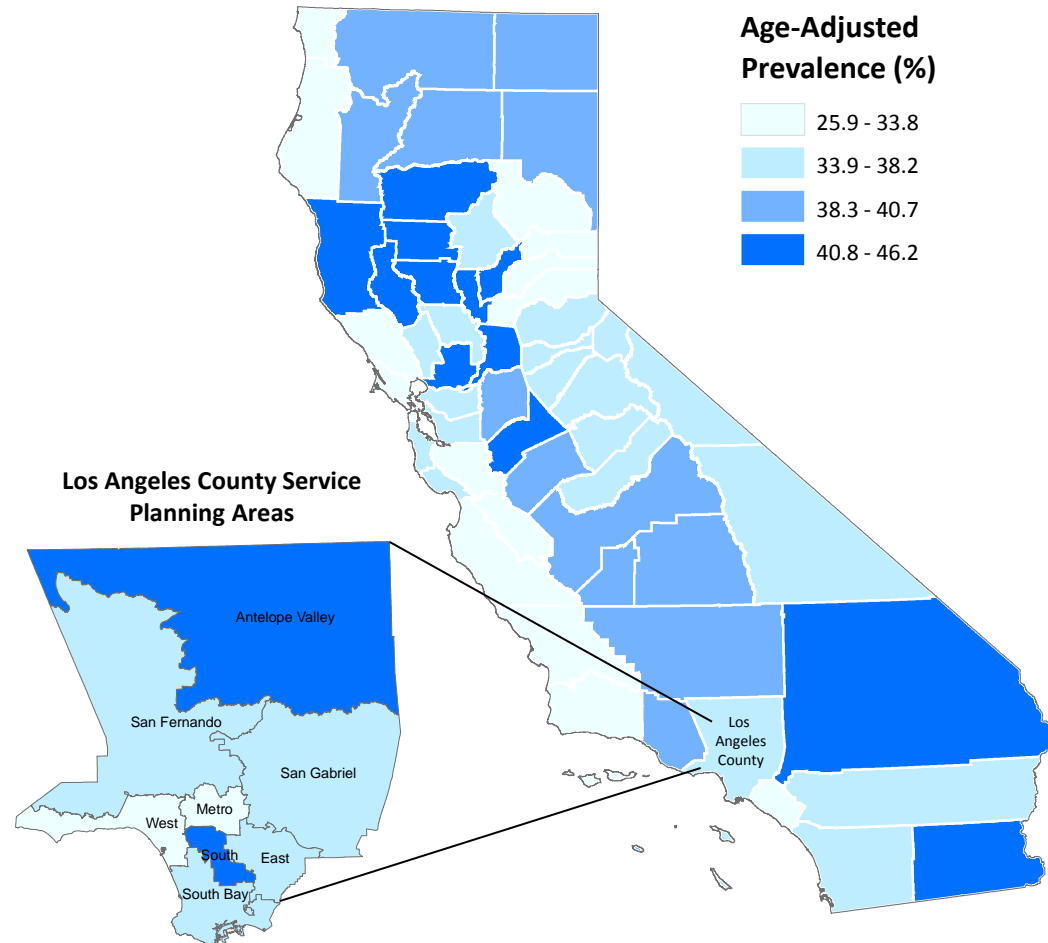


Disparities in the Disease Burden: Deaths by Race/Ethnicity, California, 2002-2007



Source: California Department of Public Health ; Department of Finance

Disparities in the Disease Burden: Share of Adults with One or More Chronic Conditions , by County and Service Planning Areas of Los Angeles County, 2007



Source: Lui C, Wallace S. Chronic Conditions of Californians: California Health Interview Survey. Oakland, CA: California Health Care Foundation, 2010.

Disparities in Disease Burden: Social Determinants Influence the Share of the California Adults Who Were Ever Told by a Doctor They Have Heart Disease, 2007



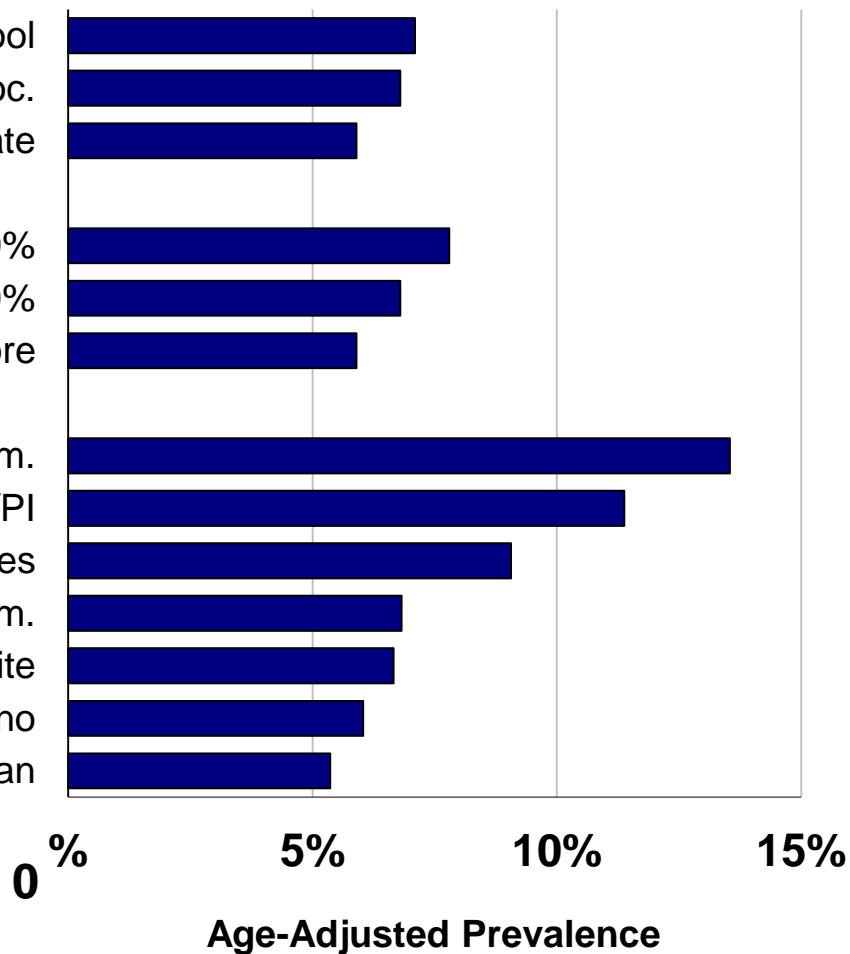
Education: Grade School
High School & Voc.
College Graduate



Poverty Level: 0-199%
200-299%
300% or more



Race/Ethnicity: Native Am.
Hawaiian/PI
2 or More Races
African Am.
White
Latino
Asian

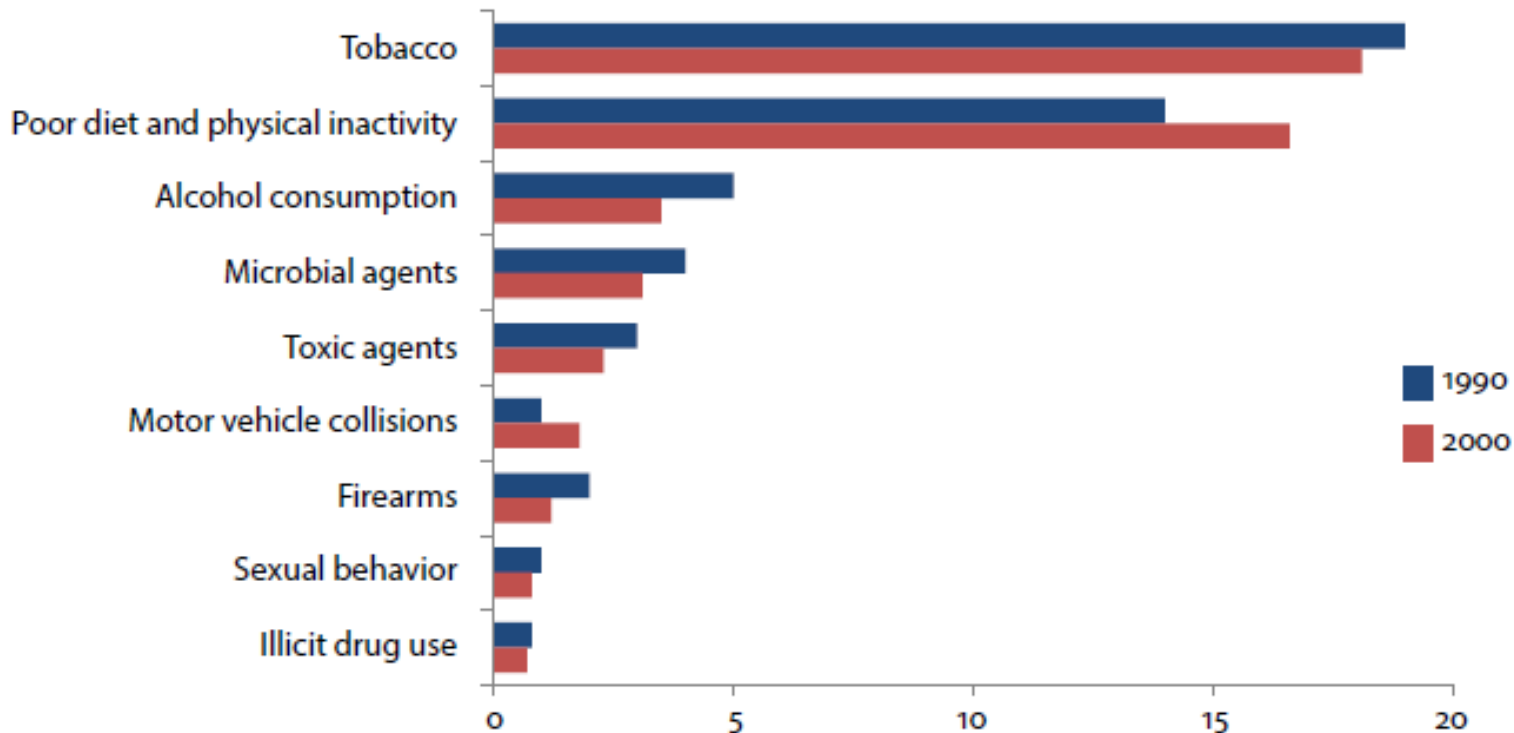


Source: California Health Interview Survey (CHIS), 2007

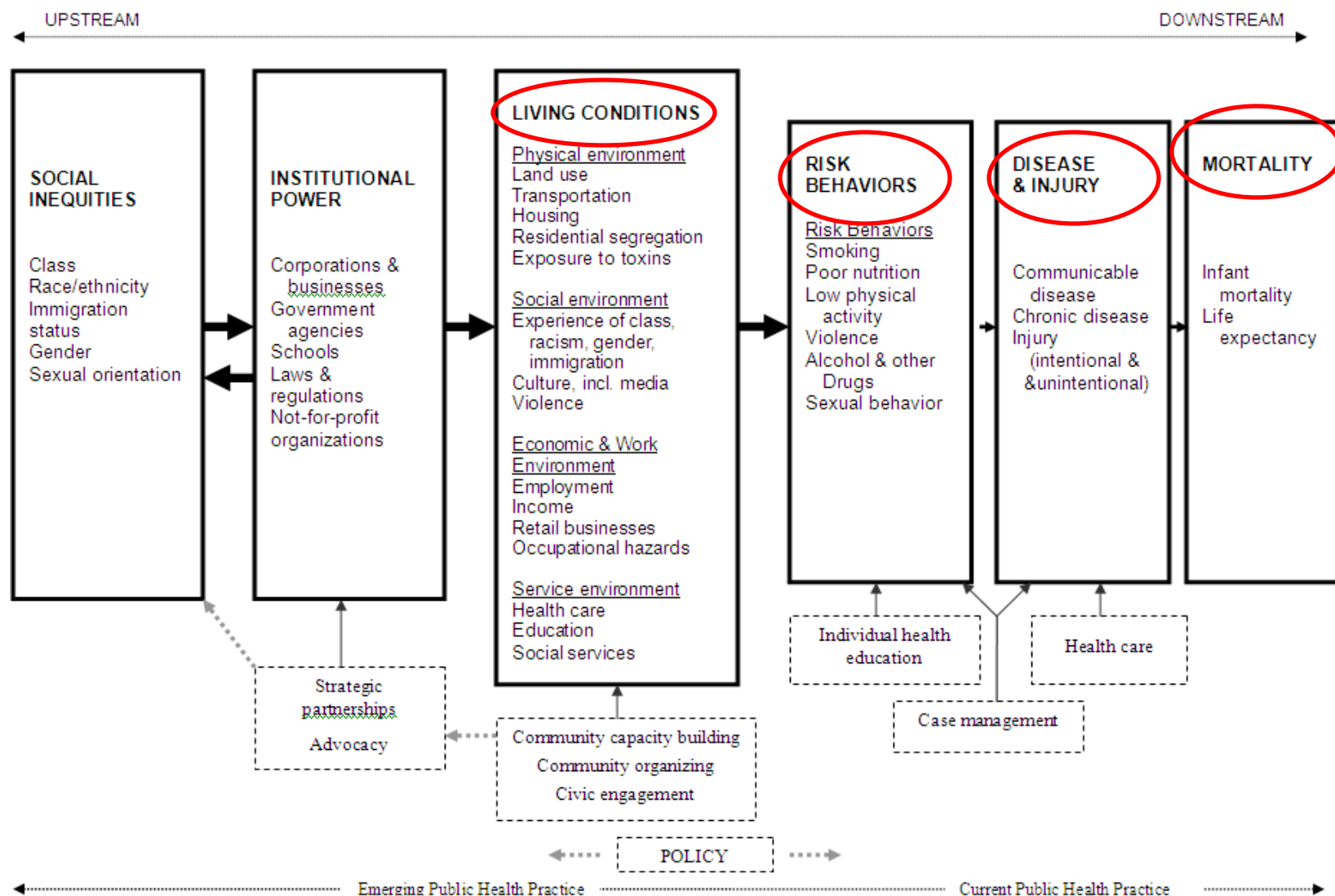
Traditional Public Model of Burden of Disease and Injury

- 3-4-50
 - 3 behavioral risk factors (tobacco, poor diet, physical inactivity) associated with
 - 4 major diseases (heart, cancer, stroke, diabetes) that account for
 - 50% of deaths

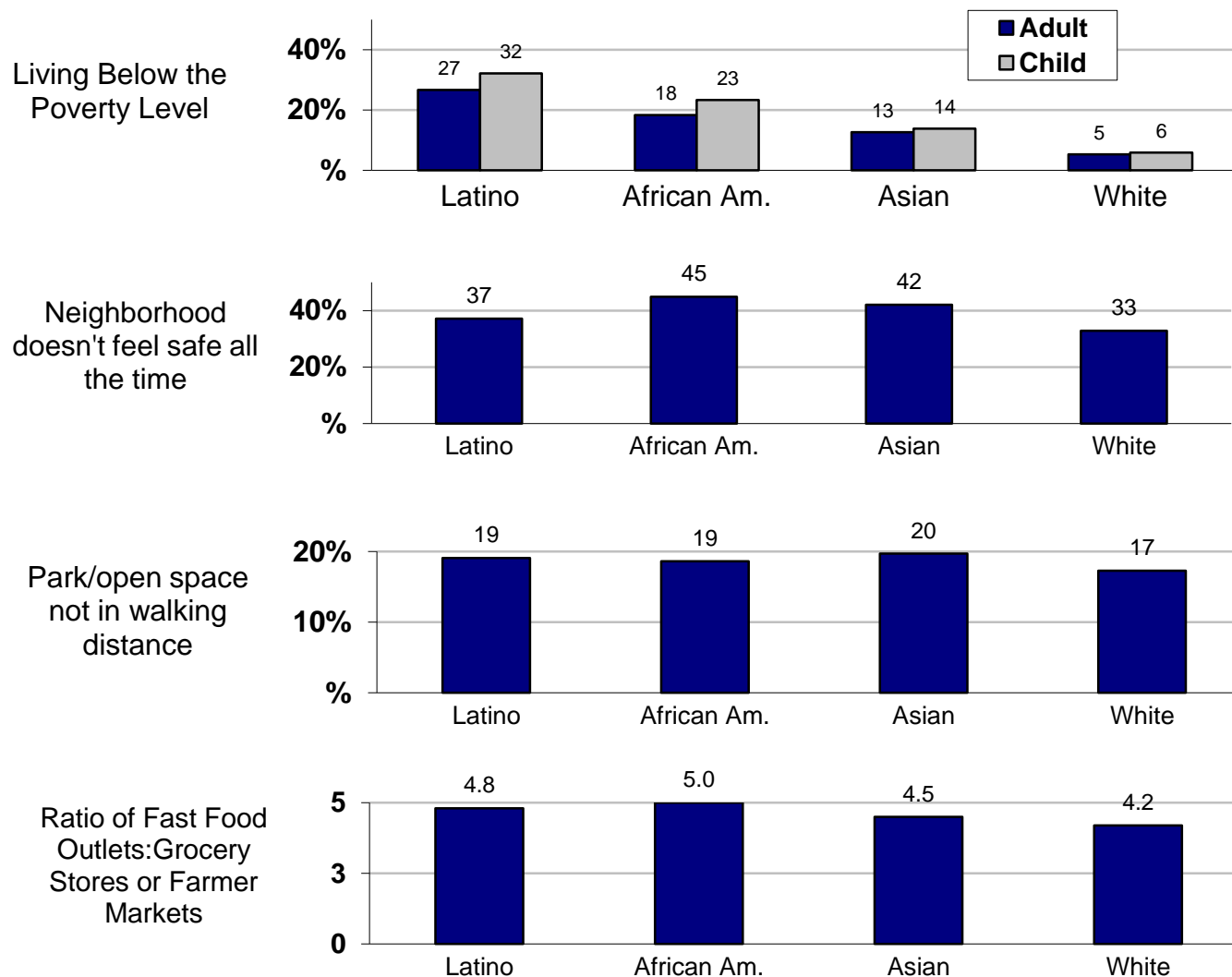
Deaths by Attributable Cause, United States



A PUBLIC HEALTH FRAMEWORK FOR REDUCING HEALTH INEQUITIES BAY AREA REGIONAL HEALTH INEQUITIES INITIATIVE

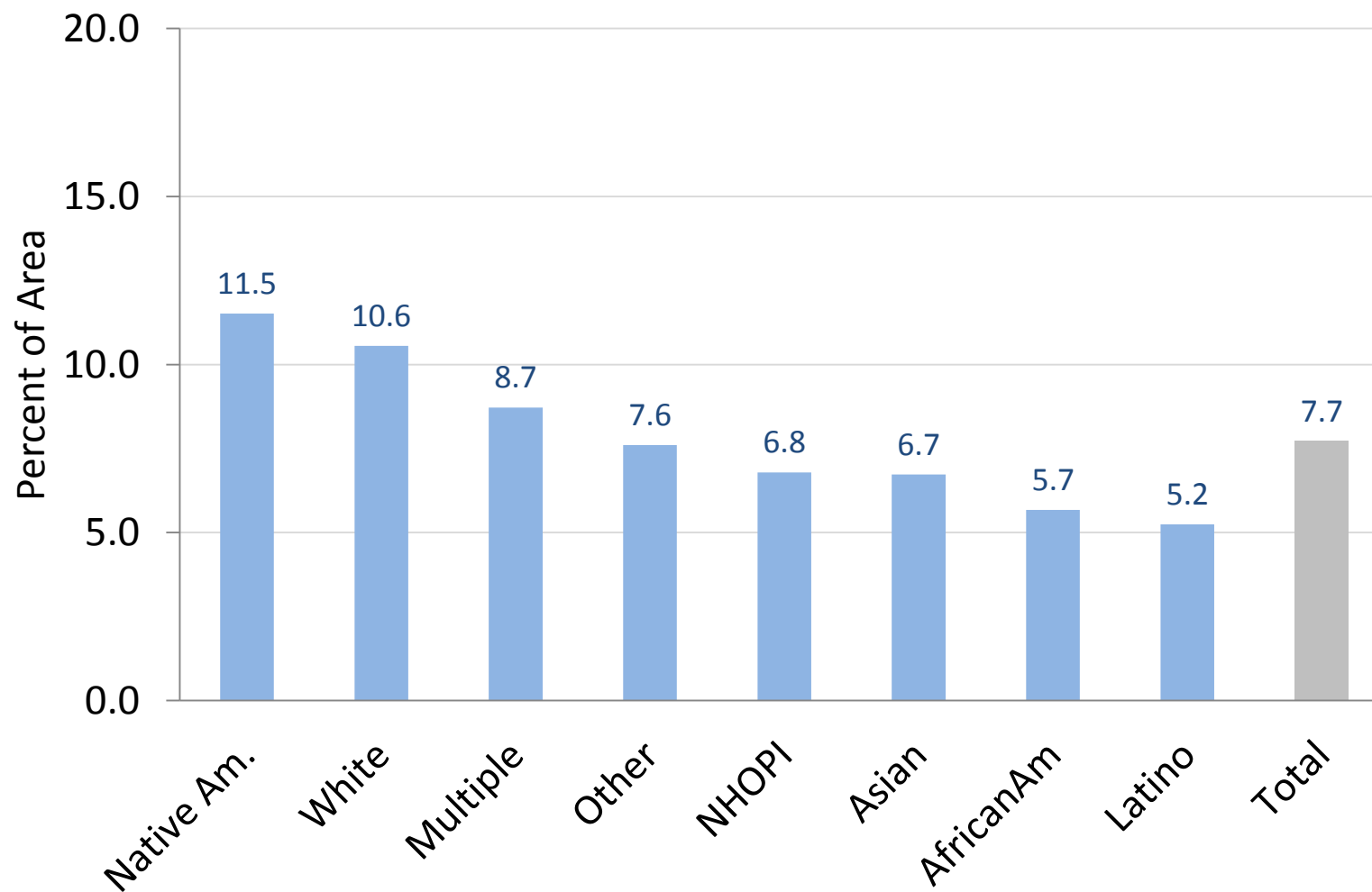


Some populations have a disproportionate share of risk factors and social determinants that adversely affect health



Source: California Health Interview Survey (CHIS), 2007

Tree Canopy Coverage* by Race/Ethnicity, California, 2011

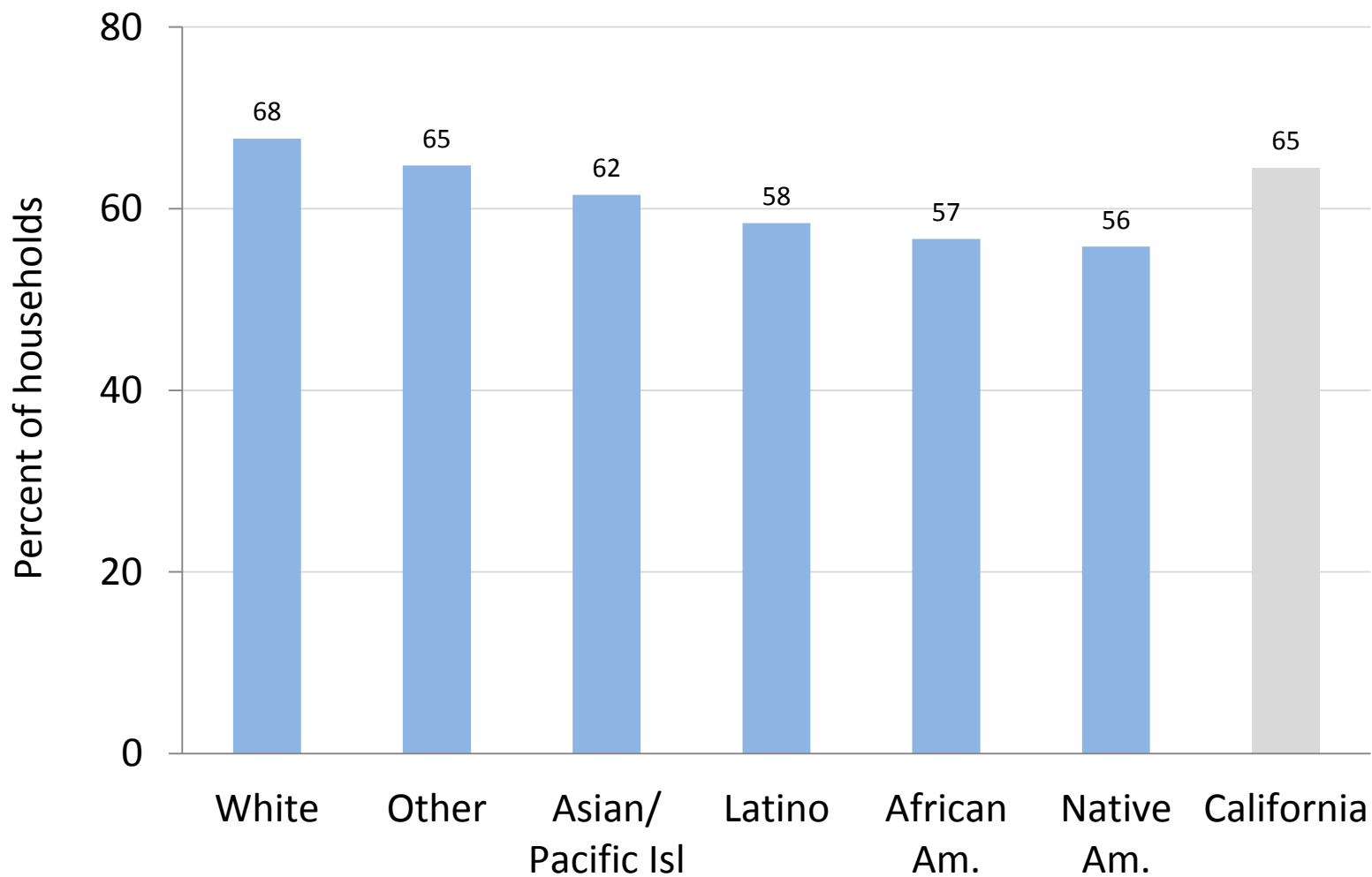


Data Source: National Land Cover Database, 2006; U.S. Census

NHOPI, Native Hawaiian and Other Pacific Islander

* Census block area weighted by population and aggregated to state total

Prevalence of Household Air Conditioning by Race/Ethnicity, California, 2009

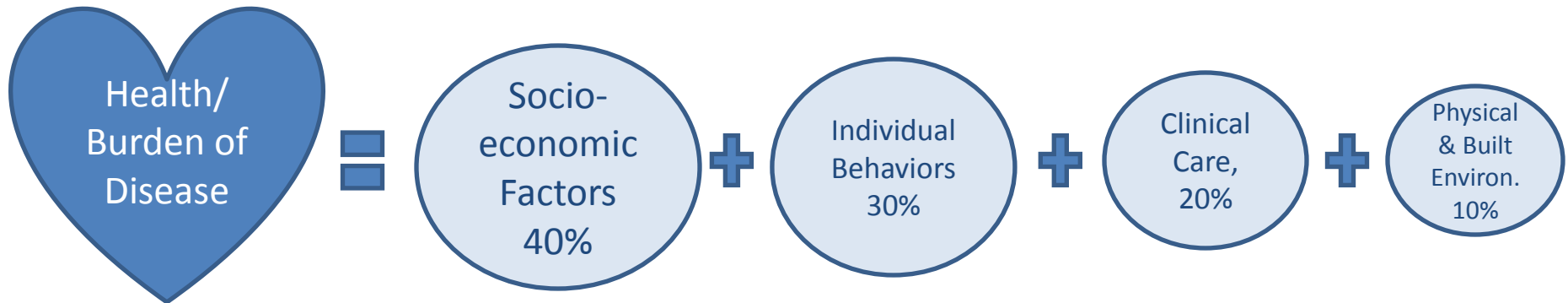


Data Source: National Land Cover Database, 2006; U.S. Census

NHOPI, Native Hawaiian and Other Pacific Islander

* Census block area weighted by population and aggregated to state total

Cumulative Impact



Source: Robert Wood Johnson/University of Wisconsin, Commission for a Healthier America, County Health Rankings, 2012

Cumulative Impact of Social Determinants of Health Over the Life Cycle and Generations

A White child from the Oakland Hills can expect to live to 85 years old, whereas an African-American child living in West Oakland—just a few miles away—can expect to live only to 70.

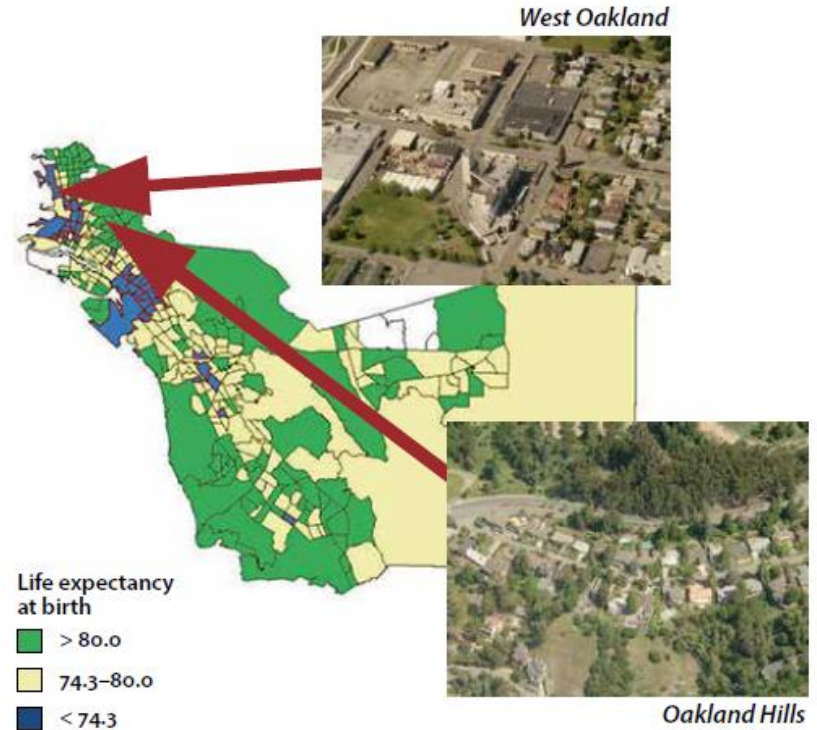
The child from West Oakland is:

- 1.5 times more likely to be born prematurely
- 7 times more likely to be born into poverty
- 2 times as likely to live in a home that is rented
- 4 times more likely to have parents with only a high-school education
- 2.5 times more likely to be behind in childhood vaccinations
- 4 times less likely to read at grade level by fourth grade
- 4 times as likely to live in a neighborhood with double the density of liquor stores and fast food outlets
- 5.6 times more likely to drop out of school

As an adult, he or she is:

- 5 times more likely to be hospitalized for diabetes
- 2 times more likely to be hospitalized for heart disease
- 2 times more likely to die of heart disease
- 3 times more likely to die of stroke
- 2 times as likely to die of cancer

Life Expectancy by Census Tract, Alameda County, 2000



Life expectancy at birth

- > 80.0
- 74.3-80.0
- < 74.3

	West Oakland	Oakland Hills
High school grads	65%	90%
Unemployment	12	4
Poverty	25	7
Home ownership	38	64
Non-White	89	49

Sources: Alameda County Public Health Department, 2008, 2012

How Does Climate Change Interact with Health Inequities and Factors that Produce Them?

- Poorer health is more prevalent in socially vulnerable populations
- Some vulnerable/disadvantaged live in higher climate risk areas (e.g., poor disproportional residing in urban heat islands)
- Some vulnerable populations have lower adaptive capacity
- Inequities in co-benefits or harms of climate mitigation or adaptation strategies, or inaction

Contact Information

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